UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/680,242	10/08/2003	Kazuomi Kato	2003-1409A	5639

513 7590 03/08/2007 WENDEROTH, LIND & PONACK, L.L.P. 2033 K STREET N. W. SUITE 800 WASHINGTON, DC 20006-1021	**EXAMINER** BERMAN, MELISSA J

ART UNIT	PAPER NUMBER
2129	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS; WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>08 October 2003</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-26</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-26</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>08 October 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>See Continuation Sheet</u>.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :10/08/2006, 5/18.2006, 3/8/2006.

DETAILED ACTION

This action is responsive to application 10/680242 filed on 8 October 2003. Claims 1-26 have been examined.

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 2002-296230, filed on 8 October 2003.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because the abstract exceeds 150 words. The abstract also contains references to figures such as "input section 11" line 10 and "anticipating section 13" line 15. Examiner suggests the removal of all references.

Correction is required. See MPEP § 608.01(b).

Specification

The disclosure is objected to because of the following informalities:

-    Foreign priority information should be in the specification following the title

-    "Predetermined operation" is a term in the claims that is not sufficiently described

in the specification. It is unclear if a "predetermined operation" is equivalent to an

"anticipated operation"

Appropriate correction is required.

Claim Objections

Claims 1 –3, 24 objected to because of the following informalities:

-    "by the operation anticipating section" is not necessary since the operation

anticipating section is the only section that anticipates the next operation in claims

1-3, 24

-    Examiner suggests "is" between "information classified" on lines 18-19 of claim

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Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-26 are rejected under 35 U.S.C. 101 because the claimed invention is directed

to non-statutory subject matter.

In determining whether the claim is for a "practical application," the focus is not on whether the steps taken to achieve a particular result are useful, tangible, and concrete, but rather that the final result achieved by the claimed invention is useful, tangible and concrete. If the claim is directed to a practical application of the §101 judicial exceptions producing a result tied to the physical world that does not preempt the judicial exception, then the claim meets the statutory requirement of 35 U.S.C. §101.

The claims are a manipulation of abstract concepts and are not clear in purpose or scope. Variations on the phrases in the claims, such as 'calculates', 'compares', 'statistically described', 'in consideration of', and 'supporting execution' do not provide a clear purpose or scope for the claimed invention.

The invention must be for a practical application and either:

1) specify transforming (physical thing - article) or

2) have the Final Result (not the steps) achieve or produce a

useful (specific, substantial, AND credible),

concrete (substantially repeatable/non-unpredictable), AND

tangible (real world/non-abstract) result

(tangibility is the opposite of abstractness).

A claim that is so broad that it reads on both statutory and non-statutory subject matter must be amended, <u>and if the specification discloses a practical application but the claim is broader than the disclosure such that it does not require the practical application, then the claim must be amended.</u>

Claims that receive data and anticipate results without a tangible medium or final result

are not statutory. "Supporting execution" does not provide for a final, end result of the claimed

invention. "Supporting execution" relies on the "operation anticipating section" and it appears

that the claims run continuously, therefore lacking a final result, as well as the claimed devices

and methods do not produce an output that is useful. To accomplish usefulness, the output can be

displayed. The claims 1-22, and 25-26 lack a tangible medium. Claims that further manipulate

data by sorting and classifying are still not statutory.

Appropriate corrections are required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-26 are rejected under 35 U.S.C. 102(b) as being anticipated by **Luciw et al**

(Patent No. 5390281) hereafter known as **Luciw**.

Claim 1

Luciw disclosed an information terminal device for executing, based on an operation input by a

user, a function corresponding to the operation, comprising:

an input section for inputting an operation required by the user (see col 4-6, for example

"words and phrases input either through serial port or via stylus" col 6 lines 36-40 and Figure 1,

objects 20 "Display & Input Assembly" and 18 "I/0");

an operation history storing section for storing information about the operation input to

the input section, as an operation history (see col 7-10, for example "knowledge base" stores

information based on observations of user and user input and "... a method of accessing the

knowledge base by means of an opportunistic event. As used herein, an 'opportunistic event' is a

significant event generated within the system without direct user input which nonetheless

presents an opportunity for providing deductive assistance to the user. As also used herein, 'user

intent' includes intents derived both from user initiated events and from opportunistic events" col

9 lines 18-35, which reads on the storage and access of operation history and see Figures 4a-4e);

an operation anticipating section for anticipating, when the operation is input to the input

section, a next operation to be subsequently input by the user, based on operation history

information stored in the operation history information storing section (see col 1-18 for example

"... collecting a number of significant observations into a set. The significant observation set is

compared to a plurality of intent templates and, if there is at least one match ... the deductive

assistant has deduced a possible intent" col 3 lines 4-13, and col 5 lines 65-68 to col 6 lines 1-3,

and Figure 3 represent a hypothesis and intent of the user based on the user's previous actions,

which reads on anticipating); and

an anticipated operation supporting section for supporting execution of a function

corresponding to the next operation anticipated by the operation anticipating section (see col 1-

18, for example "... has three parts: a) preparing to execute; b) determining that the deduced

intent should be executed; and c) actually executing the deduced intent. In preparing to execute,

the process identifies missing preconditions and attempts to resolve them" col 3 lines 14-24, the

preparation for execution as well as the execution read on supporting the anticipated operation).

Claim 2

Luciw disclosed the information terminal device according to claim 1, wherein the anticipated

operation supporting section automatically executes the function corresponding to the next

operation anticipated by the operation anticipating section, and stores information about the

executed next operation in the operation history storing section as an operation history (see col 1-

18, for example col 3 lines 14-24 which executes without a user and reads on automatic

execution and "any possible intent will be allowed to execute" col 13 lines 36-37, and col 15

lines 66-68 to col 16-17 which describe a "postcondition" that follows the execution of intent

and storing a "history list" which reads on the storing the executed operation).

Claim 3

Luciw disclosed the information terminal device according to claim 1, wherein, when a new

operation is input to the input section, the anticipated operation supporting section compares the

new operation with the next operation anticipated by the operation anticipating section based on

the operation input before the new operation, and notifies the user if the anticipated next

operation is different from the new operation (see col 1-18, for example col 7 lines 5-16 where if

hypothesized intent differs from the actual action, referred to as an "exception" in the reference

and col 15 lines 3-7 where the user is notified and asked if the anticipated service should be

executed, which functionally reads on comparison of the anticipated operation to the new

operation and the notification to the user of the anticipated operation).

Claim 4

Luciw disclosed the information terminal device according to claim 1, wherein the operation

history storing section stores the operation history information, which is operation information

described in order of operations consecutively performed by the user (see col 1-18, for example

"system events are stacked in one or more queues by .... (FIFO) basis ..." col 7 lines 19-22 and

col 9 lines 48-49 and lines 66-67 which use time as a classifier, which reads on "order of

operations consecutively" performed).

Claim 5

Luciw disclosed the information terminal device according to claim 1, wherein the operation

history storing section stores the operation history information, which is operation information

classified and statistically described in accordance with an item of operations consecutively

performed by the user (see col 1-18, for example col 8 –11 "templates" classify information, and

col 12, lines 36-50 where the variable "NMATCH" describes the number of matches in the

operation history information, which reads on a statistical description of the operations).

Claims 6, 7

Luciw disclosed the information terminal device according to claim 4, wherein the operation

anticipating section calculates a frequency about a next operation subsequently operated after the

operation previously input to the input section, based on the operation history information, and

anticipates, based on the calculated frequency, a next operation having a highest probability of

being subsequently executed, as a next operation to be input by the user (see col 1-18, for

example "variable k, which is the number of template matches and , therefore, the number

possible user intents" col 12 lines 38-68 and col 13 lines 1-36 calculates the frequency and where

the function "WEIGHT(i)" uses history information and anticipates the next operation based on

percentages, which reads on probability as well as col 16 lines 65-68 to col 17 lines 1-5 which

"Scheduling" has the highest probability of being executing based on a probability).

Claims 8, 9

Luciw disclosed the information terminal device according to claim 6, wherein the operation

anticipating section calculates the frequency in consideration of at least one operation

subsequently executed before the operation input to the input section (see col 1-18, for example

"NMATCH" col 12-13 where "NMATCH" holds the frequency of the operation input and is

used by the operation anticipating section).

Claims 10, 11

Luciw disclosed the information terminal device according to claim 7, wherein the operation

anticipating section calculates the frequency based on the operation history information every

time an operation is input to the input section (see col 1-18, for example "NMATCH" col 12-13

where "NMATCH" holds the frequency of the operation input and is used by the operation

anticipating section).

Claims 12, 13

Luciw disclosed the information terminal device according to claim 7, wherein the user is

allowed to select whether a frequency calculated based on latest operation history information is

used or a previously calculated frequency is used for anticipating a next operation (see col 1-18,

for example "weight(i)" calculates frequency, col 13, and a user sets a threshold value for

anticipating a next operation thereby limiting if the calculated frequency is used).

Claims 14, 15

Luciw disclosed the information terminal device according to claim 7, wherein the operation

anticipating section does not anticipate a next operation if the operation history information

stored in the operation history storing section is statistically insufficient for anticipating a next

operation (see col 1-18, for example "If MAX is not greater than THRESH, the variable HYP is

set to zero ..." col 13 lines 38-40 where MAX is set to "weight(i)" which is a calculated

frequency, and THRESH is a threshold that determines if the history is statistically insufficient

and HYP represents the anticipated operation).

Claim 16

Luciw disclosed the information terminal device according to claim 2, wherein the function

automatically executed by the anticipated operation supporting section previously corresponds to

each next operation to be anticipated by the operation anticipating section (see col 1-18, for

example col 14 lines 3-58 where the function automatically executed can be a PERSON and the

corresponding next operation to be anticipated would be the name of the person).

Claims 17, 18

Luciw disclosed the information terminal device according to claim 6, wherein the operation

anticipating section causes a next operation, which is opposite or contradictory to the operation

input to the input section and included in next operations subsequently executed after the

operation input to the input section, to be ruled out as a next operation to be anticipated (see col

1-18, for example "if there is not at least one match, the process control returns to step 58" col 11

lines 59-60 and col 13 lines 2-44 which describes if the operation input does not match an intent,

it will not be entered as the next operation to be anticipated, inherently ruling the next operation

to be anticipated out).

Claim 19

Luciw disclosed the information terminal device according to claim 2, wherein the operation

anticipating section compares the automatically executed next operation with a new operation

subsequently input to the input section, and reduces likelihood that the next operation is to be

anticipated if the automatically executed next operation and the new operation are opposite or

contradictory to each other (see col 1-18, for example "if there is not at least one match, the

process control returns to step 58" col 11 lines 59-60 and col 13 lines 2-44 which describes if the

operation input does not match another input, which reads on contradictory or opposite, then the

next operation is not anticipated).

Claim 20

Luciw disclosed the information terminal device according to claim 1, further comprising an

operation detecting section for determining whether or not the operation input to the input

section is a predetermined operation, wherein

the operation anticipating section anticipates a next operation to be input by the user with

respect only to an operation determined by the operation detecting section as a predetermined

operation (see col 1-18, especially "… collecting a number of significant observations into a set.

The significant observation set is compared to a plurality of intent templates and, if there is at

least one match … the deductive assistant has deduced a possible intent" col 3 lines 4-13, and col

5 lines 65-68 to col 6 lines 1-3, and col 6 lines 34-40Figure 3 represent a hypothesis and intent of

the user based on the user's previous actions as well as actions not specifically initiated by a

user, which reads on predetermined and anticipating).

Claim 21

Luciw disclosed the information terminal device according to claim 1, further comprising an

information managing section for managing special information about the operation input to the

input section, wherein

the operation history storing section stores, as operation history information, information about the operation input to the input section along with the special information supplied from the information managing section (see col 1-18, for example col 6 lines 36-40 and col 8-9 where time, date, location read on special information), and

the operation anticipating section anticipates a next operation to be input by the user, based on the operation history information, which includes the special information, stored in the operation history storing section (see col 1-18 for example "... collecting a number of significant observations into a set. The significant observation set is compared to a plurality of intent templates and, if there is at least one match ... the deductive assistant has deduced a possible intent" col 3 lines 4-13, and col 5 lines 65-68 to col 6 lines 1-3, and Figure 3 represent a hypothesis and intent of the user based on the user's previous actions, which reads on anticipating).

Claim 22

Luciw disclosed the information terminal device according to claim 21, wherein the special information includes at least any one of a date, a time, and a day of a week when the operation was input to the input section, a user type, an area, and a traveling status (see col 1-18, for example col 6 lines 36-40 and col 8-9 where time, date, location read on special information).

Claim 23

Luciw disclosed an information terminal device for executing, based on an operation input by a user, a function corresponding to the operation, comprising:

an input section for inputting an operation required by the user (see col 4-6, for example

"words and phrases input either through serial port or via stylus" col 6 lines 36-40 and Figure 1,

objects 20 "Display & Input Assembly" and 18 "I/0");

a transmitting section for transmitting information about the operation input to the input

section to a server as an operation history (see col 4, for example "input/output (I/O) circuitry);

a receiving section for receiving, from the server, information about a next operation

anticipated by the server to be subsequently input by the user after the operation input to the

input section (see col 1-18 for example "... collecting a number of significant observations into a

set. The significant observation set is compared to a plurality of intent templates and, if there is

at least one match ... the deductive assistant has deduced a possible intent" col 3 lines 4-13, and

col 5 lines 65-68 to col 6 lines 1-3, and Figure 3 represent a hypothesis and intent of the user

based on the user's previous actions, which reads on receiving the anticipated operation), and

an anticipated operation supporting section for supporting execution of a function

corresponding to the next operation received by the receiving section (see col 1-18, for example

"... has three parts: a) preparing to execute; b) determining that the deduced intent should be

executed; and c) actually executing the deduced intent. In preparing to execute, the process

identifies missing preconditions and attempts to resolve them" col 3 lines 14-24, the preparation

for execution as well as the execution read on supporting the anticipated operation).

Claim 24

Luciw disclosed an information terminal device for executing, based on an operation input by a

user, a function corresponding to the operation, comprising:

an input section for inputting an operation required by the user (see col 4-6, for example "words and phrases input either through serial port or via stylus" col 6 lines 36-40 and Figure 1, objects 20 "Display & Input Assembly" and 18 "I/0");

a storing section for storing, in a storage medium, information about the operation input to the input section, as an operation history (see col 7-10, for example "knowledge base" stores information based on observations of user and user input and "mass storage ... ROM ... hard disk drive" which reads on the storage and operation history);

an obtaining section for obtaining operation history information stored in the storage medium when the operation is input to the input section (see col 7-10, for example "knowledge base" stores information based on observations of user and user input and "mass storage ... ROM ... hard disk drive" which reads on the storage and operation history and it is inherent that these are accessed and obtained since they are used to anticipate an operation in col 3 lines 4-13, and col 5 lines 65-68 to col 6 lines 1-3);

an operation anticipating section for anticipating a next operation to be subsequently input by the user after the operation input to the input section, based on the operation history information obtained by the obtaining section (see col 1-18 for example "... collecting a number of significant observations into a set. The significant observation set is compared to a plurality of intent templates and, if there is at least one match ... the deductive assistant has deduced a possible intent" col 3 lines 4-13, and col 5 lines 65-68 to col 6 lines 1-3, and Figure 3 represent a hypothesis and intent of the user based on the user's previous actions, which reads on anticipating); and

an anticipated operation supporting section for supporting execution of a function

corresponding to the next operation anticipated by the operation anticipating section (see col 1-

18, for example "... has three parts: a) preparing to execute; b) determining that the deduced

intent should be executed; and c) actually executing the deduced intent. In preparing to execute,

the process identifies missing preconditions and attempts to resolve them" col 3 lines 14-24, the

preparation for execution as well as the execution read on supporting the anticipated operation).

Claim 25, 26

Luciw disclosed an operation supporting method performed by an information teminal device

executing, based on an operation input by a user, a function corresponding to the operation,

comprising the steps of:

inputting an operation required by the user (see col 4-6, for example "words and phrases

input either through serial port or via stylus" col 6 lines 36-40 and Figure 1, objects 20 "Display

& Input Assembly" and 18 "I/0");

storing information about the operation input at the inputting step, as an operation

history, in a predetermined storing section (see col 7-10, for example "knowledge base" stores

information based on observations of user and user input and "mass storage ... ROM ... hard

disk drive" which reads on the storage and operation history);

when the operation is input at the inputting step, anticipating a next operation to be

subsequently input by the user after the input operation, based on operation history information

stored in the storing section (see col 1-18 for example "... collecting a number of significant

observations into a set. The significant observation set is compared to a plurality of intent

templates and, if there is at least one match ... the deductive assistant has deduced a possible

intent" col 3 lines 4-13, and col 5 lines 65-68 to col 6 lines 1-3, and Figure 3 represent a

hypothesis and intent of the user based on the user's previous actions, which reads on

anticipating); and

supporting execution of a function corresponding to the next operation anticipated at the

anticipating step section (see col 1-18, for example "... has three parts: a) preparing to execute;

b) determining that the deduced intent should be executed; and c) actually executing the deduced

intent. In preparing to execute, the process identifies missing preconditions and attempts to

resolve them" col 3 lines 14-24, the preparation for execution as well as the execution read on

supporting the anticipated operation).

Conclusion

The prior art of record and not relied upon is considered pertinent to the applicant's

disclosure.

- Lenchik (Patent No. 5552806)

- Barrett et al. (Patent No. 5727129)

- Mogul (Patent No. 5802292)

- Raman et al. (Patent No. 5832231)

- Horvitz et al (Patent No. 6067565)

- Freund (Patent No. 6076174)

- DeTreville (Patent No. 6078740)

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Melissa J. Berman whose telephone number is 703-270-1393.

The examiner can normally be reached on 9/4/5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David Vincent can be reached on 571-272-3080. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Melissa J. Berman

MJB

DAVID VINCENT
SUPERVISORY PATENT EXAMINER